

Proposed Revision To: ☒ Standard Specifications For Public Works Construction ☐ Standard Plans For Public Works Construction	Change No. 347 SM (ASSIGNED BY GREENBOOK COMMITTEE)
Public Works Standards, Inc. c/o Associated General Contractors of California Los Angeles District Office 1906 West Garvey Avenue, Suite No. 100 West Covina, California 91760	Date Proposal Received 07/17/24 XX/XX/XX (ASSIGNED BY GREENBOOK COMMITTEE)
Subsection or Standard Plan to be revised:	
On page(s): 43, 103	

Warning: Public Contract Code §3400 prohibits any local agency specification that limits bidding, directly or indirectly, to any one specific concern or product. If this revision describes a proprietary or patented product, it must identify other products which equally perform the functions of the proprietary or patented product.
<u>Revision:</u> See Attached
<u>Reason For Revision:</u> This change clarifies how crushed rock is defined and identifies a testing methodology for determining the quantity of crushed rock in a sample. The change also includes specification language and testing requirements to determine if sand is nonreactive. The revised specification aligns with the requirements outlined in the Caltrans Standard Specifications which will allow for a consistent definition and testing protocol throughout the State.

Instructions: Use a separate form for each revision. Attach plain paper if more space is needed. For minor changes, copy present wording striking out words to be deleted and <u>underlining</u> new text. For major changes, rewrite or add paragraph or sections. All proposed revisions must include the reason(s) for the revision.	
Subcommittee Action: On <u>04-14-2026</u> (Date) ☒ Recommended For <u>2027</u> Supplement/Edition ☐ Rejected ☐ As Modified	Editorial Standards Subcommittee Review: On <u>05/19/2026</u> (Date) ☐ Reviewed For Surf/Und/Spec/Plans Subcommittee ☒ NO Modifications ☐ As Modified
Greenbook Committee Action: On <u>07/16/2026</u> (Date) ☒ Approved For <u>2027 Greenbook</u> Supplement/Edition ☐ As Modified ☐ Rejected	

200-1.2 Crushed Rock and Rock Dust.

200-1.2.1 General. Crushed rock and rock dust shall be the product of crushing rock or gravel. Coarse aggregate shall be defined as material retained on the No. 4 (4.75 mm) sieve. Fine aggregate shall be defined as material passing the No. 4 (4.75 mm) sieve. A minimum of 50 percent of the particles retained on the 3/8 inch (9.5 mm) sieve shall have 3 or more fractured faces. A maximum of 5 percent of the retained particles shall have no fractured faces. Of that portion which passes the 3/8 inch (9.5 mm) sieve but is retained on the No. 4 (4.75 mm) sieve, not more than 10 percent shall be gravel particles.

Crushed rock and rock dust shall be specified by nominal size (e.g. "3/4") and shall conform to the gradation requirements shown in Table 200-1.2.1 (A).

TABLE 200-1.2.1 (A)

Sieve Size	Percentage Passing Sieves		
	1" (25.0 mm)	3/4" (19.0 mm)	1/2" (12.5 mm)
1-1/2" (37.5 mm)	100	-	-
1" (25.0 mm)	90-100	100	-
3/4" (19.0 mm)	30-60	90-100	100
1/2" (12.5 mm)	0-20	30-60	90-100
3/8" (9.5 mm)	-	0-20	20-60
No. 4 (4.75 mm)	0-5	0-5	0-15
No. 8 (2.36 mm)	-	-	0-5
ASTM C131 Test Grading	A	B	B

Sieve Size	Percentage Passing Sieves			
	3/8" (9.5 mm)	1/4" (6.3 mm)	3/16" (4.75 mm)	Rock Dust
1/2" (12.5 mm)	100	-	-	-
3/8" (9.5 mm)	90-100	-	-	100
1/4" (6.3 mm)	-	100	-	-
No. 4 (4.75 mm)	30-60	75-100	100	90-100
No. 8 (2.36 mm)	0-10	0-25	40-75	-
No. 16 (1.18 mm)	-	0-5	0-10	-
No. 30 (600 µm)	-	-	-	20-60
No. 200 (75 µm)	-	0-2	0-2	5-20
ASTM C131 Test Grading	C	D	D	-

Crushed rock shall conform to the rock quality requirements shown in Table 200-1.2.1 (B).

TABLE 200-1.2.1 (B)

Test	Test Method No.	Requirements in percent
Percentage Wear 100 Revolutions 500 Revolutions	ASTM C131	15 Maximum 52 Maximum
<u>Fractured Faces in Coarse Aggregate</u> <u>1 or more Fractured Faces</u> <u>2 or more Fractured Faces</u>	<u>AASHTO T 335 (Method 1)</u>	<u>90 Minimum</u> <u>75 Minimum</u>

203-6.2.3 Rock Products for Type III Asphalt Concrete Mixtures. Coarse aggregate shall be defined as material retained on the No. 4 (4.75 mm) sieve. Fine aggregate shall be defined as material passing the No. 4 (4.75 mm) sieve.

Aggregate for alternate asphalt concrete mixtures shall conform to 203-6.2.2 except as follows:

- a) Coarse and fine aggregate shall consist of one or a mixture of the following:
 - 1) Broken or crushed rock or crushed gravel.
 - 2) Natural material having sufficient roughness to conform to the stabilometer requirements when confined within the grading limits shown in Table 203-6.5.4 (B).
- b) The percentage by weight of aggregate with 1 or more fractured faces ~~crushed particles~~, as determined in accordance with AASHTO T 335 California Test 205, shall be:
 - 1) For coarse aggregate, a minimum of 25 percent.
 - 2) For fine aggregate, a minimum of 20 percent for the portion passing the No. 4 (4.75 mm) sieve and retained on the No. 8 (2.36 mm) sieve.
- c) The weight loss, as determined in accordance with ASTM C131, shall neither exceed 15 percent during 100 revolutions nor exceed 52 percent during 500 revolutions.

200-1.4 Coarse Aggregate for Portland Cement Concrete.

Coarse aggregate shall be nonreactive and conform to one of the requirements shown in Table 200-1.4 ~~201-1.4~~ (C).

200-1.5.3 Sand for Portland Cement Concrete. Sand for Portland cement concrete shall be washed and shall conform to the gradation specified for Portland cement concrete in 200-1.5.5 and the following quality requirements:

TABLE 200-1.5.3 (A)

Tests	Test Method No.	Requirements
Organic Impurities	ASTM C40	Satisfactory ¹
Sand Equivalent	California 217	75 Minimum
Moving Average ³		75 Minimum
Soundness ² (%)	California 214	10 Maximum

1. The resultant color of the testing solution shall not be darker than the ASTM C40 standard.
2. The soundness requirement will **be** waived, provided that the durability index, Df, is 60 or greater, when determined by California Test 229.
3. Moving Average calculated in accordance with 211-5; no individual test result used shall be less than 70.

Sand shall be nonreactive and conform to one of the requirements shown in Table 200-1.5.3 (B).

TABLE 200-1.5.3 (B): REACTIVITY IDENTIFICATION

<u>Description</u>	<u>Test Method</u>	<u>Requirement</u>
<u>Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)</u>	<u>ASTM C1260</u>	<u>Expansion ≤ 0.15 Percent at 16 Days</u>
<u>Test Method for Determination of Length Change of Concrete Due to Alkali-Silica Reaction</u>	<u>ASTM C1293</u>	<u>Expansion ≤ 0.04 Percent at 365 Days</u>

Sand without reactivity identification test results or those found to be potentially reactive may be used provided the mix design conforms to one of the requirements shown in Table 200-1.5.3 (C)

TABLE 200-1.5.3 (C): REACTIVITY MITIGATION

<u>Description</u>	<u>Test Method</u>	<u>Requirement</u>
<u>Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate</u> <u>(Accelerated Mortar-Bar Method)</u>	<u>ASTM C1567</u>	<u>Expansion ≤ 0.10 Percent at 16 Days</u>
<u>Alternate Class Method¹</u>		<u>Modify Mix Design for Alternate Class Mixes Shown in Table 201-1.3.3</u> <u>(A (1.134) = B)²</u>

1. When using the Alternate Class Method, the only SCM allowed is Class F fly ash. If the proposed Alternate Class mix design contains a water-reducing admixture, the set time shall be adjusted accordingly.
2. A= the weight of cementitious material for the respective Alternate Class mix shown in Table 201-1.3.3
B= the total weight of cementitious material (75 percent Portland cement and 25 percent Class F fly ash by weight).
Example: 494-CFW-2500; 494 x 1.134= 560 total cementitious. 560 x 0.75= 420 pounds cement and 560 x 0.25= 140 pounds Class F fly ash.